

AMENDMENTS TO THE CLAIMS

All of the pending claims are reproduced below with amendments to claims 2, 3, 6-8, 10, 13, 15, and 16, and new dependent claims 23 and 24 and the current status of the claims being shown. Claims 1 and 17-22 have been cancelled.

1. (Cancelled)

2. (Currently Amended) ~~The method of claim 1~~ A minimally invasive method of holding two valve leaflets in a patient together, said method comprising:

providing a clip having two end points which are separated from each other when said clip is in an open configuration and tending to return to a naturally closed configuration by reducing distance between said end points when in said open configuration;

placing said clip across two valve leaflets in a patient such that said two end points each penetrate completely a different one of the two leaflets while said clip is in said open configuration; and

allowing said clip to tend to return to said closed configuration, whereby the two valve leaflets are held together by said clip, wherein said two end points of said clip are each detachably attached to a tissue penetrating needle through a flexible member, and wherein placing said clip comprises penetrating and completely pulling one of the needles through one of said two valve leaflets tissue parts and the other of the needles through the other of the two valve leaflet tissue parts.

23. (Currently Amended) The method of claim 2 further comprising:

releasably grabbing one of said needles by a needle holder;

inserting a cannula through an incision towards the valve leaflets tissue parts;

advancing said needle holder through said cannula with said one needle grabbed thereby;

operating said needle holder to cause said one needle to penetrate and be completely pulled through said one of said two valve leaflets tissue part from one side to the other side;

thereafter releasing said needle from said needle holder;

thereafter grabbing and pulling said needle again by said needle holder from the other side of said one of said two valve leaflets tissue part;

thereafter releasably grabbing the other of said needles by said needle holder, advancing said needle holder through said cannula with the other needle grabbed thereby, operating said needle holder to cause the other needle to penetrate and be completely pulled through the other valve leaflet tissue part from one side to the other side thereof;

thereafter situating said clip on both of said two valve leaflets tissue parts; and

thereafter detaching said clip from the needles.

B, 3 4. (Original) The method of claim 3 wherein said needle holder includes an outer tube and an inner member which has a front end adapted to releasably grab said needle and is slidable inside said outer tube.

4 5. (Original) The method of claim 3 wherein said needle holder further includes a spring which is disposed inside said outer tube and serves to apply a force on said inner member backward away from said front end.

5 6. (Currently Amended) The method of claim 1 wherein said clip comprises a wire made of a shape memory material.

6 7. (Currently Amended) The method claim 1 wherein said clip in said closed configuration is looped by more than 360°.

7 8. (Currently Amended) ~~The method of claim 1~~ A minimally invasive method of holding two valve leaflets in a patient together, said method comprising:

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providing a clip having two end points which are separated from each other when said clip is in an open configuration and tending to return to a naturally closed configuration by reducing distance between said end points when in said open configuration;

placing said clip across two valve leaflets in a patient such that said two end points each penetrate completely a different one of the two leaflets while said clip is in said open configuration; and

allowing said clip to tend to return to said closed configuration, whereby the two valve leaflets are held together by said clip, wherein one of said two end points of said clip is detachably attached to a flexible member which is attached to a tissue penetrating needle through a flexible member, and wherein placing said clip comprises penetrating and completely pulling said needle through one of the two valve leaflets tissue parts and thereafter the other of the two valve leaflets tissue parts.

10 (Previously Amended) Apparatus for minimally invasive valve repair, said apparatus comprising:

a tissue penetrating needle, a flexible member, and a clip, said tissue penetrating needle being connected through said flexible member to said clip, said clip having two end points which are separated from each other when said clip is in an open configuration and tending to return to a naturally closed configuration by reducing distance between said end points when in said open configuration; and

a needle holder including an outer tube and an inner member which has a front end adapted to grab said needle and is slidable inside said outer tube.

11 10. (Currently Amended) The apparatus of claim 10 ¹⁰ including a second needle and a second flexible member coupled to said second needle, wherein ~~said needle is one of a pair of needles, said flexible member is one of a pair of flexible members~~ each flexible member is connected to a corresponding one of said two end points of said clip, and ~~said release mechanism~~ is a pair of release mechanisms each being directly attached to a corresponding one of said one end points of said clip to releasably connect said flexible members to said clip.

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12 11. (Original) The apparatus of claim 9¹⁰ wherein said needle holder further includes a spring which is disposed inside said outer tube and serves to apply a biasing force on said inner member backward away from said front end.

13 12. (Original) The apparatus of claim 11¹² wherein said front end of said inner member has a slit for accepting and grabbing said needle therein.

14 13. (Currently Amended) The apparatus of claim 12¹³ wherein said outer tube, said inner member and said slit are designed such that said slit opens wide enough to accept said needle therein and to release said needle therefrom when if said inner member is pushed forward against said biasing force and ~~that~~ said slit becomes narrower and firmly grips said needle therein when if said inner member is moved backward.

B 15 14. (Original) The apparatus of claim 9¹⁰ wherein said clip is generally U-shaped when in said open configuration.

16 15. (Currently Amended) The apparatus of claim 9¹⁰ wherein said clip comprises a wire made of a shape memory material.

17 16. (Currently Amended) The apparatus of claim 9¹⁰ wherein said clip in said closed configuration is looped by more than 360°.

[Claims 17-22 (Cancelled)

8 23. (New) The method of claim 8⁷ wherein said clip comprises a wire made of shape memory material.

9 24. (New) The method claim 8¹ wherein said clip in said closed configuration is looped by more than 360°.

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